## REMARKS

Summary of the Invention

The method is a combination of an optical data burst transmitting system (optical burst switching - OBS) and a data packet transmitting system. In the invention, a data burst (BURST 1; FIG 2) is transmitted between two nodes comprising a plurality of data packets, and the connection is maintained to transmit data burst "on-the-fly during the consecutive phase" until another node needs the same channel (e.g., same wavelength and fiber) for transmitting its own burst (BURST 2).

Claim Rejections – 35 USC § 103

Claims 9, 10-11 and 14 have been rejected under 35 USC 103(a) as unpatentable over Xiong, further in view of Corbalis, further in view of Kozaki. The rejection is respectfully traversed.

Xiong only discloses the transmission of bursts. In Xiong, "[t]he...invention...reduce[s] the gaps/voids between bursts transmitted on reserved data channels, which in turn increase the data channel utilization." See, col. 2, lns. 37-40. The passages cited by the Examiner, namely col. 10 – lns. 9-10 and col. 9, lns. 14-17, on the other hand, refer to reservation and termination of a channel by a burst transmitting ingress node itself. According to Xiong, the channel is reserved by a channel reservation bit. If the channel has to be terminated an "unreserved channel bit RD = 0" is sent (col. 9, lns. 14-18). Xiong only discloses the transmission of data burst, not the transmission of non aggregated (IP) data packets on-the-fly. There is no disclosure of a "consecutive transmission phase" where data packets are transmitted, as required by the claimed invention. Xiong also fails to disclose a termination of a connection caused by another reservation during the consecutive transmission phase while data packets are transmitted on-the-fly, as required by the claimed invention.

The Examiner admits (page 4, second paragraph) that "Xiong is silent but Corbalis teaches terminating the connection while data packets are transmitted on-the-fly when .... (Column 1, line 56-59, existing connection is terminated for the establishment for a new connection setup)." Applicants respectfully disagree that Corbalis discloses this limitation.

Rather, Corbalis only discloses an optical switch fabric with redundancy. The disclosure at col. 1, ln. 56-59, cited by the Examiner, refers to the BACKGROUND. Here, the specification refers to "connections in progress may have to be interrupted momentarily while rerouting takes place to handle the new connections." It is respectfully submitted that the Examiner's statement that "while data packets are transmitted on-the-fly" is erroneous. Corbalis does not disclose that "data packets are transmitted on-the-fly". Additionally, Corbalis refers to an optical switch fabric, not a burst switching system. Nor does the reference disclose the connection between the nodes or how a connection in a burst switching system is reserved or terminated. More specifically, Corbalis, at col. 1, lns. 53-59) states: "Problems with rearrangeable nonblocking switches include the fact that the required device settings to route connections through the switch are not determined easily and that connections in progress may have to be interrupted momentarily while rerouting takes place to handle the new connections." Significantly, this is an unwanted interruption that causes a failure. Therefore, Corbalis teaches away from the claimed feature and suggests a redundant switch to avoid unnecessary interruptions (abstract).

Therefore the combination of Xiong and Corbalis, either alone or in combination, does not disclose a burst switching system where a connection is reserved when a burst is transmitted and only terminated when data packets are transmitted on-the-fly.

Then the Examiner states on page 4 of the Office Action, last full paragraph that: "Combination of Xiong and Corbalis is silent but Kozaki teaches transmitting additional non-aggregated data packets on-the–fly between the nodes during the consecutive transmission phase (Para [0014], burst data may be transmitted on real time property or on the fly such that state that a delay is reduced as much as possible)." Applicants respectfully disagree.

Kozaki, at paragraph [0014], reads:

> The data to be input into the buffer memory $25a$ of the slave station
> apparatus $20$-1 are periodic data $26a$, and the data to be input into the
> buffer memory $25b$ are burst data $26b$. The data reading section $24$
> makes control so as to read the periodic data $26a$ in the buffer memory
> $25a$ in preference to the burst data $26b$ in the buffer memory $25a$. This
> is because the burst data to be input in the burst manner do not
> normally require real-time property unlike sound data, and even if
> transmission is delayed to a certain extent, all of the burst data may the

transmitted, but as the periodic data require real-time property, it is necessary that the periodic data have periodicity and are transmitted in a state that a delay is reduced as much as possible.

Kozaki discloses a burst transmission system "where periodic data and burst data are multiplexed ...." See, paragraph [0020]. The data streams are transmitted by two different data sources. The first data stream is transmitted periodically and the second data stream is converted into bursts and inserted between the periodically data (FIG. 11). Therefore, Kozaki does not disclose transmitting data packets on-the-fly, as required by the claimed invention. Significantly, in the claimed invention, a single data stream is transmitted as bursts and as data packets on-the-fly to gain a better transmission performance.

Additionally, with respect to claim 11, the Examiner cites Xiong at col. 2, lns. 16 – 19. This paragraph describes the reservation mechanism, not that the reservation is only possible during a consecutive phase. That is, according to the instant invention, data packets are transmitted on-the-fly and that the data channel is not reserved for the consecutive phase. This is contrary to Xiong. Xiong does not disclose the transmission of data packets on-the-fly during a consecutive phase. Rather, according to Xiong, the channel is reserved (col. 9, ln. 66 – col. 10, ln. 11) or not reserved (col. 9, lns. 14-18).

Claims 12, 13 and 18 have been rejected under 35 USC 103(a) as unpatentable over Xiong, Corbalis, further in view of Garland; Claim 15 has been rejected under 35 USC 103(a) as unpatentable over Xiong, Corbalis and Kozaki, further in view of Stilling; and Claims 16-17 have been rejected under 35 USC 103(a) as unpatentable over Xiong, Corbalis and Kozaki, further in view of Garland. The rejections are respectfully traversed for at least the reasons presented in the arguments above.

In light of the foregoing, Applicants respectfully submit they have addressed each and every item presented by the Examiner in this Office Action. Favorable reconsideration of all of the claims, as amended, is earnestly solicited. Applicants submit that the present application, with the foregoing claim amendments and accompanying remarks, is in a condition for allowance and respectfully request such allowance.

In the event any further matters requiring attention are noted by Examiner, or in the event that prosecution of this application can otherwise be advanced thereby, a telephone call to Applicants' undersigned representative at the number shown below is invited. Further, Applicants hereby petition for the Commissioner to charge any additional fees or any underpayment of fees which may be required for this Amendment and which may be required to maintain the pendency of this case at any time during prosecution, or to credit any overpayments, to Deposit Account No. 04-1061.

Respectfully submitted,

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